Republic of Kenya

EDICT OF GOVERNMENT

In order to promote public education and public safety, equal justice for all, a better informed citizenry, the rule of law, world trade and world peace, this legal document is hereby made available on a noncommercial basis, as it is the right of all humans to know and speak the laws that govern them.

KS 1146 (2012) (English): Polyolefin Bags for Packing Fertilizer – Specification (Draft Standard)

BLANK PAGE

KENYA STANDARD

KS 1146:2012
ICS 59.060.10

Polyolefin Bags for Packing Fertilizer — Specification

KEBS 2012

Second Edition 2012

TECHNICAL COMMITTEE REPRESENTATION

The following organizations were represented on the Technical Committee:

Africa Polysack Ltd.
Allpack Industries Ltd.
Flexpac International
Kenya Industrial Research and Development Institute (KIRDI)
Kenya Sisal Board
Moi University
National Cereals & Produce Board
Polysack
Premier Bag and Cordage Ltd.
Rai Plywoods (Kenya) Ltd.
Red Plum Enterprises
Teita Estate
Kenya Textile Training Institute
Coffee Board
Raffia Bags
Athi River Mining-Rhino Cement
Kenya Tea Development Association
Wonderpac Industries
Kenya Bureau of Standards — Secretariat

REVISION OF KENYA STANDARDS

In order to keep abreast of progress in industry, Kenya Standards shall be regularly reviewed. Suggestions for improvements to published standards, addressed to the Managing Director, Kenya Bureau of Standards, are welcome.

KENYA STANDARD

KS 1146: 2012
ICS 59.060.10

Polyolefin Bags For Packing Fertilizer — Specification

KENYA BUREAU OF STANDARDS (KEBS)

Head Office: P.O. Box 54974, Nairobi-00200, Tel.: (+254 020) 605490, 602350, Fax: (+254 020) 604031
E-Mail: info@kebs.org, Web:http://www.kebs.org

Coast Region
P.O. Box 99376, Mombasa-80100
Tel.: (+254 041) 229563, 230939/40
Fax: (+254 041) 229448

Lake Region
P.O. Box 2949, Kisumu-40100
Tel.: (+254 057) 23549, 22396
Fax: (+254 057) 21814

Rift Valley Region
P.O. Box 2138, Nakuru-20100
Tel.: (+254 051) 210553, 210555

Foreword

.
This Kenya Standard was developed by the Technical Committee on Hard Fibre and Related Products under the guidance of the Projects Standards Committee and in accordance with the procedures of the Bureau.

Woven polyolefin sacks are widely used in packing granular fertilizer in convenient quantities for handling and use and to protect the fertilizer from contamination with moisture and chemical fumes during storage and transportation. It is therefore important that these sacks meet the minimum requirements for this purpose. In this second edition of the Kenya standard, the parameters on Breaking strength of seam and sacking, mass of bag and mass per square metre of sacking have been reviewed to be in harmony with current industry trends.

During the preparation of this standard, reference was made to the following document:

BS 6162: 1981 Specification for open-mouth sacks manufactured from woven polyolefin tape yarn.

Acknowledgement is hereby made for the assistance received from the above source.

Polyolefin Bags for Packing Fertilizer— Specification

1 Scope

This Kenya Standard specifies the requirements for woven polyolefin sacks for packing fertilizer.

2 Normative references

The following standards are indispensable in the application of this standard:

KS 1037 Methods of test for woven bags

KS 1056 Specification for woven wrapping cloth
Part 1:Polypropylene cloth

3 Definitions

For the purposes of this standard, the following definitions shall apply:

3.1 woven polyolefin sack
A flexible container made from fabric manufactured from woven polyolefin tape yarn, with or without liner.

3.2 liner
A single ply flexible container which may be loosely inserted or anchored in a sack.

3.3 woven polyolefin fabric
A sheet material woven from polyolefin tape yarn.

3.4 polyolefin tape yarn
Flat yarn having a high ratio of width to thickness, composed of polyolefin polymer.

3.5 polyolefin polymer
A linear polymer obtained by polymerization of an unsaturated hydrocarbon (e.g. ethylene or propylene) to give a linear saturated hydrocarbon. Examples are polyethylene and polypropylene.

3.6 coated fabric
A fabric coated on one or both sides with a suitable polymer.

3.7 degree of warp coverage
A value expressed as percentage indicating the extent to which a unit area of a fabric is covered with warp tapes.

3.8 degree of weft coverage
A value expressed as percentage indicating the extent to which a unit area of a fabric is covered with weft tapes.

4 Requirements

4.1 Materials

4.1.1 *Fabric*
The fabric shall be woven from polyolefin tape yarns and shall either be coated or uncoated.

4.1.2 *Stitching Thread*
The stitching thread shall be made from either polypropylene, or other materials provided they are not adversely affected by the contents of the sack or by the expected climatic conditions in transit, storage and use. The number of stitches per 10 cm shall not be less than 12.

4.2 Dimensions

The internal dimensions of the bag shall be as specified in Table 1.

4.3 Construction

4.3.1 *Sack*
The sack shall be produced either from material woven as a tube or from flat woven material.

4.3.2 *Degree of Coverage*
The degree of warp or weft coverage shall be not less than 100. This shall be determined in accordance with KS 08-1056: Part 1: Appendix A.

4.3.3 *Mass of the Sack*
The minimum mass of the sack without liner shall be as specified in Table 1.

4.3.4 *Edge Sealing*
All raw edges shall be sealed to prevent fraying.

4.3.5 *Base Closure*
The base closure shall be effected either by a turned-over and stitched seam or by bonding and shall comply with the requirements of **4.6**.

4.3.5.1 *Turned-over and stitched seam*
Where the base closure is effected by a turn-over and stitched seam the turn-over shall be 2 cm minimum, and the stitch line shall be 1 ± 0.3 cm from the base so formed and shall pass through all four thicknesses of the material.

4.3.5.2 *Bonded*
Where the base closure is bonded, the seam shall be effected by applying capping tape over the ends of the sack and securing by means of an adhesive. The bond shall be such as to ensure compliance with the requirements of **4.6**.

4.3.6 *Longitudinal Seams*
Where longitudinal seams are used, they shall be either stitched or bonded and shall be such as to ensure compliance with the requirements of **4.6**. All longitudinal seams shall be along the edge fold except for bonded seams which shall be on the back face in the centre, unless required to be off-set to accommodate printing.

4.3.6.1 *Stitched*
Where longitudinal seam is effected by a turned over and stitched seam the turn-over shall be 2 cm minimum and the stitch line shall be 1 ± 0.3 cm from the outer edge of the seam so formed and shall pass through all the four thicknesses of the material.

4.3.6.2 *Bonded*

Where the longitudinal seam is bonded the edges of the material shall be overlapped 3 cm minimum and bonded with a width of bond of 1.5 cm minimum. The bond shall be such as to ensure compliance with the requirements of **4.6**.

4.4 Mouth

The mouth of the sack shall be either:

(a) Plain, formed from a selvedge or from a sealed raw edge (*see* **4.3.4**), or

(b) Hemmed, with single or double fold over stitched continuously round the mouth of the sack.

4.5 Breaking Load of Fabric

The minimum breaking load of the fabric shall be as specified in Table 1.

4.6 Breaking Load of Seam (Base Closure and Longitudinal)

The minimum breaking load of seams shall be as specified in Table 1. This shall be determined in accordance with Clause **15** of KS 08-1037.

4.7 Liners

4.7.1 *Insertion*

Where liners are used, they shall be either:

(a) Loosely inserted,

(b) Anchored with an adhesive (or other suitable medium),

(c) Stitched at the base closure, or

(d) Stitched at the mouth.

Where a stitch anchorage is used, the stitch line shall only perforate the liner below the bottom seal or within 1 ± 0.5 cm of the mouth of the sack.

4.7.2 *Dimensions*

The minimum dimensions of liners shall be as specified in Table 2.

4.7.3 *Mass*

The minimum mass of liners shall be as specified in Table 2.

5. Packing

The sacks (bags) shall be packed in bales of the agreed quantity. The bales shall be wrapped in suitable materials and securely bound.

6. Marking

The following information shall be marked on each bale:

(a) Manufacturer's name or registered trade mark,

(b) Description of goods,

(c) Quantity of pieces,

(d) Contact mass in kg,

(e) Bale number,

(f) The declaration 'Made in Kenya' or the country of origin.

TABLE1. REQUIREMENTS OF SACK (BAG) WITHOUT LINER

CHARACTERISTIC / **SACK CAPACITY**	**Length, cm, minimum**	**Width, cm, (minimum)**	**Mass without liner (Minimum**	**Breaking Load of Fabric, Warp and Weft ,N (Minimum)**	**Breaking load of seam, N (Minimum)**	**Mass in g/m^2, minimum**
50 kg	95	55	75	600	350	70
25 kg	80	45	50	600	350	70
10 kg	60	35	30	600	350	70
Test method	Clause **9.2** of KS 08-1037	Clause **9.2** of KS 08-1037	Clause **6** of KS 08-1037	Clause **11** of KS 08-1037	Clause **15** of KS 08-1037	70

TABLE 2. REQUIREMENTS OF LINER

CHARACTERISTIC / **SACK CAPACITY**	**Length, cm (Minimum)**	**Width, cm (Minimum)**	**Thickness, microns (Minimum)**	**Mass, g (Minimum)**
50 kg	100	58	30	40
25 kg	85	48	30	30
10 kg	65	38	30	24

